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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,707	09/11/2003	Seong Ho Kang	YHK-0116	4751

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EXAMINER	
VU, DAVID HUNG	

ART UNIT	PAPER NUMBER
2828	

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H:A

Office Action Summary	Application No.	Applicant(s)	
	10/659,707	KANG ET AL.	
	Examiner	Art Unit	
	David Vu	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6,7,9-23,30 and 31* is/are rejected.

7)☒ Claim(s) *3-5,8,24-29,32 and 33* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/01/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because in figure 5, numeral 68 is designated a "SUSTAIN DRIVER"; however, specification (page 14) described it as a "sustain voltage source". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

3. The disclosure is objected to because of the following informalities: "said" throughout the specification (e.g., page 9) should be deleted.

Appropriate correction is required.

Claim Objections

4. Claims 5,22 and 30 are objected to because of the following informalities:

Claim 5, "...temperature of the panel is more raised can be applied in response to said bit control signal." is awkward. Claim 25 also recites "...temperature level is more raised." which makes the sentence awkward.

Claims 22 and 30, "driven a temperature" should properly be ---driven at a temperature---.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 9-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9 and 16, the recitation "...can be applied at the other case." renders the claim unclear as to what "other case" is being referred to.

Claim 11, "said bit control signal" renders the claim indefinite as lacking the strict antecedent basis.

Claim 18, "said bit control signal" renders the claim indefinite as lacking the strict antecedent basis.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-2, 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Ide et al (hereinafter Ide), U.S. Pub No 2003/0001802.

Ide et al discloses a driving apparatus for a plasma display panel, comprising: a scan driver 4 for applying a first sustaining pulse to a scan electrode during a sustain period; a sustain driver 3 for applying a second sustaining pulse alternating with said first sustaining pulse to a common sustain electrode during the sustain period; a sustain voltage source B1, B3 for supplying a driving voltage to the scan driver and the sustain driver such that the first and second sustaining pulses can be applied; control means 5 for controlling a voltage value of the driving voltage in correspondence with a driving

temperature at which the panel is driven; and a timing controller 9 coupled with controller 5 for controlling the scan driver and the sustain driver in correspondence with peripheral temperature sensed by temperature sensor 7, see, for example, figures 1,3, paragraphs [0016},[0017],[0034],[0041],[0043],[0044],[0049],[0067], and [0068].

Regarding claim 2, the sustain voltage source includes: at least two driving voltage sources B1,B3 for supplying the driving voltage; and a plurality of switching devices S3, S4, S13 provided among the driving voltage source, the scan driver and the sustain driver.

9. Claims 22 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Atsushi, Japan Pat No 2002-207449.

Atsushi essentially discloses a method of driving a plasma display panel, comprising the steps of: applying a sustaining pulse PSL having a first period when the panel is driven at the normal temperature; and applying a sustaining pulse PSH having a second period different from said first period when the panel is driven a temperature higher than the normal temperature (figures 5-9, pages 4-5).

Regarding claims 30-31, at least figure 6 shows scanning pulse PyH having a first width when the panel is driven at the normal temperature; and scanning pulse PyL having a second width different (larger) from the first width when the panel is driven a temperature lower than the normal temperature.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ide.

Ide as discussed from the above, essentially discloses the claimed invention but fails to explicitly disclose two temperature sensors. However, employing two temperature sensors would have been considered obvious to one having ordinary skill in the art. Note that inherently the temperature detector 7 of the Ide reference can detect a wide range of temperature (i.e., from high to low). Accordingly, it would have been obvious to one having ordinary skill in the art at the time of applicant's claimed invention was made to have employed two temperature sensors; thus, different temperature ranges would have been detected.

12. Claims 9-10 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ide in view of Atsushi.

Regarding claims 9-10, Ide as discussed from the above, essentially discloses the claimed invention but fails to explicitly disclose the timing controller controls the scan driver and the sustain driver such that first and second sustaining pulses each having a first period can be applied when the panel is driven at high temperature, whereas it controls the scan driver and the sustain driver such that first and second sustaining pulses each having a second period different from the first period can be applied. Atsushi discloses timing controller 71 in the drive circuit 70 for controlling the

scan driver and the sustain driver such that first and second sustaining pulses each having a first period can be applied when the panel is driven at high temperature, whereas the sustaining pulses each having a second period different (smaller) from the first period can be applied (figures 1 and 5-9, pages 4-5). An obvious modification would have provided the Ide reference with the timing controller in the drive circuit as taught by Atsushi; thus, a stable sustain discharge at high temperature would have been realized.

Regarding claims 16-17, at least figure 6 show scanning pulse PyL having a first width when the panel is driven at low temperature while scanning pulse PyH having a second width different from the first width. Selecting the first width wider than the second width would have been considered obvious to one having ordinary skill in the art so as to achieve a stable sustain discharge.

13. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atsushi.

Atsushi as discussed from the above, essentially discloses the claimed invention but fails to explicitly disclose second period is wider than the first period. However, setting the second period wider than the first would have been considered obvious to one having ordinary skill in the art. It would have been obvious to one having ordinary skill in the art at the time of applicant's claimed invention was made to have selected the second period wider than the first period; thus, a stable sustain discharge at high temperature would have been realized.

Allowable Subject Matter

14. Claims 3-5, 8, 24-29, and 32-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

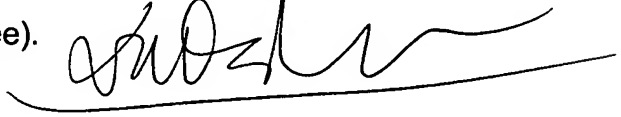
15. Claims 11-15 and 18-21 are would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Vu whose telephone number is (571) 272-1831. The examiner can normally be reached on M-F 8am-430pm.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Vu

Primary Examiner
Art Unit 2828

dv